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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,390	05/02/2006	Lit-Hsin Loo	DREX-1065US	5780
21302 7590 03/24/2011 KNOBLE, YOSHIDA & DUNLEAVY EIGHT PENN CENTER SUITE 1350, 1628 JOHN F KENNEDY BLVD PHILADELPHIA, PA 19103			EXAMINER CLOW, LORI A	
			ART UNIT 1631	PAPER NUMBER
			MAIL DATE 03/24/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	Application No. 10/538,390	Applicant(s) LOO ET AL.	
	Examiner LORI A. CLOW	Art Unit 1631	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 March 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
 b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☒ Applicant's reply has overcome the following rejection(s): 35 USC 101, nonstatutory rejection; 35 USC 112, 2nd rejection.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: 22-26,52 and 53.
 Claim(s) objected to: _____.
 Claim(s) rejected: 5-21,33-38,40,41,43 and 50.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
 13. ☐ Other: _____.

/LORI A. CLOW/
Primary Examiner, Art Unit 1631

Continuation of 11. does NOT place the application in condition for allowance because: The reply fails to overcome the outstanding rejection under 35 USC 103(a). The rejection is re-iterated below from the Final Office Action of 1/11/2011.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-21, 33-38, 40, 41, and 43-50 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,064,770 (Scarth et al.; Published 16 May 2000), in view of 7,027,933 Paulse et al.; priority to November 16, 2000).

The instant claims are drawn to an analyzer and method for pattern classification to compress a set of data including steps of removing portions of the data, removing noise from the data, removing common characteristics from the data, and by normalizing the data. In regard to claims 5-21, 33-38, 40, 41, and 43-50 Scarth et al. teach a method and system of identifying events in data by clustering data points into plural clusters according to data value patterns (column 3, lines 35-41; column 5, lines 1-21). Scarth et al. teach clustering data value patterns of greatest similarity into groups with the between group dissimilarity maximized and the within group dissimilarity minimized using a clustering algorithm (column 3, lines 42-61; removing data portions/characteristics). Statistical analyses are applied to the data in order to associate statistical relevance to the clusters. Subsets of data can be selected (column 4, lines 6-31). Scarth et al. teach noise removal (column 4, lines 6-14). Scarth et al. teach data normalization (column 4, lines 36-38). Scarth et al. teach determination of standard deviation of data values with normalization of data (column 4, lines 6-51; column 6, lines 1-14). Scarth et al. teach data maximization (see above). Scarth et al. teach comparison of normalization values to a baseline calculation (column 6, lines 15-22). Scarth et al. teach decreasing cardinality by forming subsets that excludes domains of non-interest (column 5, lines 12-19). Scarth et al. do not specifically teach comparing indexed data to control data to evaluate common characteristics nor do Scarth et al. teach identification of noise using a threshold, as in claims 10, 14, 37, and 41. However, Paulse et al. teach the analysis of mass spectra using a classification model that can differentiate between classes of samples associated with samples of different biological statuses. The data are analyzed using a statistic that will classify by recursive partitioning (column 3, lines 13-22). Biological data may be obtained using spectra from a sample with known characteristics and the data are used for classification of unknown samples (column 4, beginning line 63 to column 5, line 33). Further, Paulse et al. teach the removal of noise before classification by applying various filters to the data which removes the high frequency noise. A baseline can then be calculated (column 10, lines 35-49).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to have used the mass spectra analysis systems of Paulse et al. with the identifying events in data by clustering data points into plural clusters according to data value patterns according to Scarth et al., as the invention of Paulse et al. is specifically drawn to the processing of mass spectrometric data. Further, Scarth et al. motivate one to do so because they teach that any suitable classification method may be used with the embodiments of the invention and that the data sets may be used accordingly (column 15, lines 31-49).

Response to Applicant's Arguments

Applicant argues that Paulse does not disclose a common characteristic removal module comprising a means for comparing indexed data to control data to evaluate common characteristics.

This is not persuasive. As is stated above, Paulse et al. the removal of noise before classification by applying various filters to the data which removes the high frequency noise. A baseline can then be calculated (column 10, lines 35-49). Paulse et al. describe the preprocessing of data before it is used to form the classification model, which can include any suitable manner of processing the mass spectra, for example, processing the signals by taking log values, removing outliers, removing signals less likely to be associated with potential markers, removing signals with low intensities etc... (column 12, lines 18-26). While not explicitly stating that common characteristics are removed, Paulse et al. later teach that some or all of the signals may be used to form a dataset and that using data from less than all signals, processing progresses more rapidly (column 12, lines 45-60). Paulse et al. teach that predefined criteria can be used to select certain signals or signal clusters (column 13, lines 27-25) and that clusters having less than the predetermined number are discarded (column 13, lines 55-65). Finally, it is noted that Applicant argues that "it appears to be that Paulse is directed towards the opposite of what the present invention is directed towards". This is not persuasive because Applicant has not provided evidence to the contrary.

Note Regarding Request to Remove Finality

Applicant asserts that in the previous Office Action the Examiner failed to reject claims 10, 14, 37, 41, 52, and 53 using prior art and

that in this Office Action, the Examiner newly rejects claims 10, 14, 37, and 41 using prior art, however still made the rejection final citing as a basis therefor that the amendment necessitated the new grounds for rejection. Applicant further asserts that since there effectively was no amendment to the specific limitations found within claims 10, 14, 37, and 41 and Applicant merely incorporated the claims from which the non-art rejected dependent claim depended from, the claims should have been allowable provided the formalities raised in the rejection were addressed.

This is not persuasive. In the claim set pending before the Non-final office action, claims 1-26 and 28-53 were examined. Claim 10 depended from claim 4, which depended from claim 3, which depended from claim 1. Claim 2 depended from claim 1. Therefore, claim 10 was examined including the limitations of claim 1, 3, and 4. The claims as amended after the Non-final office action, incorporated the limitations of claims 1, 2, 3, and 4 into claim 10. Claim 10 was not examined previously in the context of having the limitation of claim 2. Therefore, this amendment necessitated the new grounds of rejection and consideration. The same is true for claim 14. For claim 37, the claim set before the Non-final office action included claim 28 as the independent claim from which claim 29 depended and claim 30 depended. Claim 31 depended from claim 30. The claim set before the Final rejection was amended to make claim 37 the independent claim, incorporating claims 28-30 and 32. However, claim 37 was not considered in light of including claim 29 in the Non-final office action, as claim 29 depended from claim 28 and claim 37 depended from claim 32 which depended from claim 31 which depended from claim 30 which depended from claim 28. It did not include dependency from claim 29. Therefore, the amendment adding all of those limitations together necessitated a new grounds of rejection and consideration. The same is true for claim 41. Therefore, the Final was proper.

/Lori A. Clow, PhD/
Primary Examiner, AU 1631